REMARKS

Claims 1, 4-7, 11, 15-16, 18, and 21 have been amended. No new claims have been added. No claims have been canceled. Claims 1, 4-11, 14-16, and 18-21 are pending.

Applicant's representative is grateful for the allowance of claims 8 and 18. The Office Action asserts that claims 9-10 and 19-20 stand objected to as being dependent from allowed independent claims 8 and 18. As no other rejection or objection are applied to claims 9-10 and 19-20, it is assumed that claims 9-10 and 19-20 are also allowed.

Claim 21 stands objected to being dependent from a claim which has been canceled. Claim 21 has been amended to depend from claim 15. Accordingly, the objection to claim 21 should be withdrawn.

The specification stands objected to as providing insufficient support for the portions of claims 1 and 11 which recite "first dimension" and "second dimension." Claims 1 and 11 stand rejected under 35 U.S.C. § 112, first paragraph, because the specification allegedly "does not reasonably provide enablement for any texels along particular dimension in the filter domain." Claim 1 and 11 have been amended to recite instead "u direction" and "v direction." Support of the use of the u and v direction/coordinate values is found throughout the specification, including, for example, at Fig. 8 and page 12, lines 12-27. Accordingly, the objection to the specification and the rejection to claims 1 and 11 under 35 U.S.C. § 112, first paragraph should be withdrawn.

Claims 6, 11, and 12 stand rejected under 35 U.S.C. § 112, second paragraph, as having insufficient antecedent basis for the recitation "said first and second

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numbers." Claim 12 is not a pending claim as it was canceled in the Amendment filed June 28, 2004. Claims 6 and 11 have been amended and no longer recite either "said first number" or "said second number." Accordingly, the rejection to claims 6, 11, and 12 under 35 U.S.C. § 112, second paragraph should be withdrawn.

Claims 1, 4, 6, 11, 14, 16, and 21[1] stand rejected under 35 U.S.C. § 102(e) as being anticipated by Lee[2] (U.S. Patent No. 6,097,397.) Please note that the Office Action purports to base its rejection on the Japanese counterpart of the Lee patent, i.e., JP 11250279. However, the references in the rejection appear to be directed at U.S. patent of Lee (i.e., U.S. Patent No. 6,097,397). Accordingly, the rejection is being treated as a rejection based on the U.S. patent and not the Japanese counterpart. If the Examiner wishes to instead apply the Japanese counterpart, references to a translation of the Japanese counterpart should be supplied with the Office Action. Claims 5, 7, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Iourcha (U.S. Patent No. 6,373496). These rejections are respectfully traversed:

Each of the independent claims recite a set of LOD values where one LOD value is associated with an amount of change in a first dimension of a texture space (e.g., u direction) and another LOD value is associated with an amount of change in a second dimension of the texture space (e.g., v direction). More specifically:

Claim 1 recites, *inter alia*, "operating from object data on a pixel by pixel basis texture coordinates and LOD (Level of Detail) values expressed with the amount of change in u direction and v direction of texture coordinates";

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[1]   The Office Action states that claim 2_0_ (instead of claim 2_1_) is rejected under 35 U.S.C. § 102(e), however, the context of the rejection strongly suggest that the rejection is intended to apply to claim 21, not claim 20 (which is dependent upon allowed claim 18).

[2]   The rejection for claim 1 states that "Charles discloses an image processing method ...." It is assumed that the Office Action is referring to the Lee reference.

Claim 11 recites, *inter alia*, "a circuit for operating texture coordinates and LOD (Level of Detail) values expressed with the amount of change in u direction and v direction of texture coordinates on a pixel by pixel basis from object data"; and

Claim 18 recites, *inter alia*, "a circuit for operating texture coordinates and LOD (Level of Detail) values expressed with the amount of change in u direction and v direction of texture coordinates on a pixel by pixel basis from object data."

Lee is directed to a graphical apparatus and method for performing anisotropic texture mapping. In Lee, the coordinate axes for the dimensions in textures space are named S and T. The Office Action alleges that Lee discloses obtaining a set of LOD values comprising a first LOD value in a said first (texture) dimension and a second LOD value in said second (texture) dimension, and cites for support to Fig. 1a, and column 5, lines 10-17. The method of Lee is shown by the flowchart of Fig. 2. The portion of Lee cited by the Office Action corresponds to step 27, which is labeled as "Determine Pixel to Texture Space Gradients." This step is wholly unrelated to the use of any LOD parameter, which can be confirmed by reading the portion of the patent cited by the Office Action. More specifically, column 5, lines 10-17 is devoid of any disclosure regarding any LOD values. Accordingly, the Office Action's assertion that Lee discloses obtaining a set of LOD values is in error.

Indeed, Fig. 2 shows that Lee's method first utilizes a single (conventional) LOD value in step 35. Step 35 is described beginning at column 6, line 5, which states "[n]ext, step 35 is entered and the proper LOD 'D' is determined." At column 6, line 29, Lee further states "[t]he LOD number D can be varied to to have a desired number in the vicinity of either Ts or Tt..." Thus, Lee merely discloses the prior art, that is, a single LOD value D to best accommodate both dimensions in texture space, instead of the set

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of LOD values, one for each dimension of the texture space. Accordingly, Lee does not disclose or suggest:

> "operating from object data on a pixel by pixel basis texture coordinates and LOD (Level of Detail) values expressed with the amount of change in u direction and v direction of texture coordinates" (as recited in claim 1), or

> "a circuit for operating texture coordinates and LOD (Level of Detail) values expressed with the amount of change in u direction and v direction of texture coordinates on a pixel by pixel basis from object data" (as recited in claim 11), or

> "a circuit for operating texture coordinates and LOD (Level of Detail) values expressed with the amount of change in u direction and v direction of texture coordinates on a pixel by pixel basis from object data" (as recited in claim 18).

Iourcha discloses a graphical system for performing tri-linear filtering. Referring to Fig. 12, Iourcha discloses a texture mapping engine 806 which is coupled to a texture cache 804. The texture mapping engine 806 reads a texture from the texture cache 804. The texture is supplied in parallel to a Level n generator 1202 and a Level n+1 sample producer 1206. The Level n generator 1202 creates a first filtering domain from the texels read from the texture cache and produces a first color value from the first filtering domain. The first color value is supplied to a interpolator 1204. The Level n+1 sample producer 1206 operates upon the same texels read from the texture cache 804 to create texels for a Level n+1 generator 1208. The Level n+1 generator 1208 operates similarly to the Level n generator 1202, but operates on the texels generated by the Level n+1 sample producer 1206 to create a second color value. The second color value is also supplied to the Interpolator 1204, which interpolates a final color value from the first and second color values.

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Significantly, Iourcha discloses the use of a (single) conventional level of detail (LOD) parameter. Iourcha calculates two color values from two adjacent (conventional) LODs. More specifically, if the LOD parameter is n, Iourcha discloses interpolating a final color value based on colors calculated from processing on data associated with LOD n and LOD n+1. In contrast, the claimed invention requires the use of a set of LOD values, where each LOD value of the set is associated with a different dimension of the texture space. Accordingly, Iourcha also fails to disclose or suggest the above quoted portions of claims 1, 11, and 18.

Claim 8 and its depending claims 9-10 have been allowed. Claims 1, 11, and 18 are believed to be allowable over the prior art of record. Depending claims 4-7, 14-16, and 19-21 are believed to be allowable for at least the same reason as claims 1, 11, and 18.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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